

Observations on *Cicada pruinoso* and a description of a new species.

By WM. T. DAVIS.

In ENTOMOLOGICAL NEWS for April, 1907, Prof. Smith and Mr. Grossbeck mention eight examples of *Cicada pruinoso* Say from southern New Jersey. Say says of the species that it is "found on the Missouri; it is also very common in Pennsylvania. . . ." In July 1909 Mr. Geo. P. Engelhardt collected a male *pruinoso* near Wilmington, N. C..

So far as I am aware nothing has been written of the song and habits of this species, and so during the last week in August, 1910, I visited Cape May Co., N. J., with the object of finding out something about the insect. I had not long to wait, for on the 26th, on the road leading westward from Cold Spring, I heard in a hedge of large cedars and other tangle a cicada's song quite new to me. Upon climbing up one of the cedars I was pleased to capture the first *pruinoso* that I had seen alive. There were several others in the hedge, but I could not catch them. Later I found that the species was quite general in the cedar woods, though occasional in the deciduous forest as well. I collected one and heard many in the cedar and pine woods near Fishing Creek, but they were more numerous in a grove of red cedars, hollies, persimmon, etc., standing near the shore between Higbee's Landing and the Town Bank. I saw those females at their place, all on the cedars, but I didn't catch any of them, though I collected many males. At times there would be four or five singing together, and then there would be a period of quiet, and one might pass that way and never suspect the presence of *Cicada pruinoso*. The song when heard at a considerable distance might be taken for that of a bird; there is only a loud *zape*, *zape*, *zape*, but upon a nearer approach the constant *zing* is heard, so that the song may be rendered as *s-zape*, *s-zape*, *s-zape*, that is to say there is continuous *zing* with the *zape* at pulsating intervals. The song commences with a low *zing* or *zzz*, and gradually breaks into an impetuous *s-zape*. Some-

times the male sways his abdomen up and down with each *zape*. Occasionally an individual will only *zzz*, and not get up enough energy to *zape*. I listened to several such. Altogether the song is quite unlike any other cicada song that I have heard and cannot be confused with that of any of the other New Jersey species.

I collected several specimens of *Cicada lyricen* and two of *Cicada linnei* in the vicinity of Cold Spring, Bennett and Fishing Creek, but strange to say I heard or saw nothing of *Cicada sayi*.

In August, 1909, Mr. George P. Engelhardt collected a cicada at Blowing Rock, N. C. which was new to me. In July, 1910, Mr. Leng and I secured a much broken specimen at Clayton, Ga., and still later I received from Mr. Brimley a male and female of the same species collected at Raleigh, N. C. I have also a single specimen from Staten Island, N. Y., collected some years ago, that may belong to this species. While the insect resembles *Cicada lyricen* De Geer there are some striking differences in color by which it may be readily identified, and Mr. John A. Grossbeck to whom I have shown my material thinks with me that it should be named. I take pleasure therefore in naming this species for Mr. George P. Engelhardt of the Brooklyn Museum, who gave me my type specimen, and who has been my companion on many pleasant rambles afield.

Cicada engelhardti n. sp.

Length: ♂ 32 mm., to tip of wings, 50 mm.; ♀ 30 mm., to tip of wings 50 mm.

Head black, sometimes with narrow, tawny stripe on front. Prothorax black, with small greenish fulvous central arrow-shaped spot, broadest behind. In *lyricen* this spot is broadest in front. Posterior and lateral borders of the pronotum black. Mesothorax nearly all black, with two faint parenthesis-like lines of fulvous partly enclosing the central portion. Sometimes these lines are heavier and there is a shade of fulvous on the posterior portion of the mesothorax. The inner surface of the front marginal vein is usually back and darker than the same parts in *lyricen*. Abdomen black above, with two narrow pruinose lines or spots at base. Beneath, with broad central black stripe and at each side is a broad lateral pruinose border.

This insect is blacker than *Cicada lyricen*, lacking the considerable amount of fulvous markings of that species, particularly on the prothorax.